

ROBUST SUMMARY
ALKYL SULFIDE CATEGORY
CAS # 67124-09-8
ENVIRONMENTAL FATE AND PATHWAY ELEMENTS:
BIODEGRADATION

<i>Test Substance</i>	
CAS #	67124-09-8
Chemical Name	2-propanol, 1-(tert-dodecylthio)-
Remarks	This substance is also referred to as propanol/dodecylthio derivative in HERTG's Test Plan for Alkyl Sulfide Category. For more information on the chemical, see Section 2.0 "Chemical Description of Alkyl Sulfide Category" in HERTG's Test Plan for Alkyl Sulfide Category.
<i>Method</i>	
Method/Guideline followed	OECD 301F
Test Type (aerobic/anaerobic)	Aerobic
GLP (Y/N)	Yes
Year (Study Performed)	1998
Contact time (units)	28 days.
Inoculum	Return activated sludge from domestic waste water treatment plant.

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Remarks for test conditions	<p>Inoculum: The sludge was aerated and stirred for 2-3 hours, homogenized for 2 minutes and allowed to stand for one-half to one hour. The supernatant was pipetted out and used for pre-adaptation. The inoculum was pre-adapted to the test material for 14 days during which the test substance was added incrementally at concentrations equivalent to 4, 8 and 8 mg carbon/L on days 0, 7, and 12, respectively. The targeted microbial level in the test mixture was 10,000 to 1,000,000 cells/mL.</p> <p>Conc of test chemical: Test substance concentration was approximately 100 mg/L mineral medium, giving at least 50 to 100 mg ThOD per L medium. No organic solvents were used to facilitate the dispersion of the test material. The test substance was weighed onto a teflon coupon and introduced into the medium.</p> <p>Temp of incubation: $23 \pm 1^{\circ}\text{C}$.</p> <p>Dosing procedure: A measured volume of the inoculated mineral medium containing approximately 100 mg/L test substance is continuously stirred in a closed system for 28 days.</p> <p>Sampling: The oxygen uptake were monitored continuously and recorded every 4 hours throughout the test.</p> <p>Controls: Yes, except abiotic and toxicity checks were not included.</p> <p>Analytical method: Oxygen uptake was measured using a BI-1000 electrolytic respirometer system.</p> <p>Method of calculating measured concentrations: Not applicable.</p> <p>Other: The inoculum was pre-adapted to the test substance for 14 days.</p>
Results	
Degradation % after time	5.9% after 28 days.
Kinetic (for sample, positive and negative controls)	<p>% biodegradation (days)</p> <p>Reference (sodium benzoate) – 30.5% (1d), 76.4% (7d), 88.8% (28d). Test substance – 0% (1d), 1.6% (7d), 5.9% (28d).</p>
Breakdown Products (Y/N) If yes describe breakdown products	Not monitored.

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<i>Conclusions</i>	The test substance showed a low biodegradation rate (5.9%) in 28 days. The reference substance, sodium benzoate, reached a level of 88.8% in the same test period.
<i>Data Quality</i>	Reliable without restrictions
<i>References</i>	This robust summary was prepared from an unpublished study by an individual member company of the HERTG (the underlying study contains confidential business information).
<i>Other</i>	Updated: 12/27/99